

INCO ALLOYS INTERNATIONAL, INC. -- MONEL W.E. 187N -- 3439-00-878-2882

=====
Product Identification
=====

Product ID:MONEL W.E. 187N

MSDS Date:12/01/1990

FSC:3439

NIIN:00-878-2882

MSDS Number: BJXPB

=== Responsible Party ===

Company Name:INCO ALLOYS INTERNATIONAL, INC.

Address:GUYAN RIVERS ROAD

City:HUNTINGTON

State:WV

ZIP:25720

Country:US

Info Phone Num:800-624-3411

Emergency Phone Num:304-526-57

80

Preparer's Name:INCO ALLOYS INTERNATIONAL

CAGE:28553

=== Contractor Identification ===

Company Name:INCO ALLOYS INTERNATIONAL, INC. DIV INTL NICKEL CO

Address:3200 RIVERSIDE DR

City:HUNTINGTON

State:WV

ZIP:25705

Country:US

Phone:304-526-5100

CAGE:28553

=====
Composition/Information on Ingredients
=====

Ingred Name:CALCIUM CARBONATE (MARBLE) (LIMESTONE)

CAS:1317-65-3

RTECS #:EV9580000

Fraction by Wt: 5-10%

Other REC Limits:NONE SPECIFIED

OSHA PEL:15 MG/M3 TDUST

ACGIH TLV:10

MG/M3 TDUST; 9192

Ingred Name:CALCIUM FLUORIDE
CAS:7789-75-5
RTECS #:EW1760000
Fraction by Wt: 1-5%
Other REC Limits:NONE SPECIFIED
OSHA PEL:2.5 MG/M3 AS F
ACGIH TLV:2.5 MG/M3 AS F

Ingred Name:COPPER (SARA III)
CAS:7440-50-8
RTECS #:GL5325000
Fraction by Wt: 40-70%
Other REC Limits:NONE SPECIFIED
OSHA PEL:0.1MG/M3 FUME/1 DUST
ACGIH TLV:0.2MG/M3 FUME; 9192
EPA Rpt Qty:5000 LBS
DOT Rpt Qty:5000 LBS

Ingred Name:MANGANESE (SARA III)
CAS:7439-96-5
RTECS #:OO9275000
Fraction by Wt: 1-5%
Other RE
C Limits:NONE SPECIFIED
OSHA PEL:(C) 5 MG/M3 DUST
ACGIH TLV:5 MG/M3 DUST 9293

Ingred Name:NICKEL (SARA III)
CAS:7440-02-0
RTECS #:QR5950000
Fraction by Wt: 15-40%
Other REC Limits:NONE SPECIFIED
OSHA PEL:1 MG/M3
ACGIH TLV:1 MG/M3; 9192

Ingred Name:SODIUM FLUOALUMINATE (SYN: SODIUM ALUMINUM FLUORIDE)
CAS:15096-52-3
RTECS #:WA9625000
Fraction by Wt: 5-10%
Other REC Limits:NONE SPECIFIED
OSHA PEL:2.5 MG/M3 AS F
ACGIH TLV:2.5 MG/M3 AS F

Ingred Name:SODIUM SILICATE
CAS:1344-09-8
Fraction by Wt:

1-5%
Other REC Limits:NONE SPECIFIED

Ingred Name:SILICA, CRYSTALLINE - FUSED
CAS:60676-86-0
RTECS #:VV7328000
Fraction by Wt: 1-5%
Other REC Limits:NONE SPECIFIED
OSHA PEL:SEE TABLE Z3
ACGIH TLV:0.1 MG/M3 RDUST;9293

Ingred Name:TITANIUM DIOXIDE
CAS:13463-67-7
RTECS #:XR2275000
Fraction by Wt: 1-5%
Other REC Limits:NONE SPECIFIED
OSHA PEL:15 MG/M3 TDUST
ACGIH TLV:10 MG/M3 TDUST; 9293

===== Hazards Identification =====

LD50 LC50 Mixture:UNCLASSIFIED WELDING FU
MES=5MG/M3 PEL

Routes of Entry: Inhalation:YES Skin:YES Ingestion:NO
Reports of Carcinogenicity:NTP:YES IARC:YES OSHA:NO

Health Hazards Acute and Chronic:THESE ELECTRODES HAVE NO KNOWN
TOXICOLOGICAL PROPERTIES OTHER THAN CAUSING ALLERGIC REACTIONS IN
SENSITIVE INDIVIDUALS. USER GENERATED DUSTS AND FUMES MAY ON
CONTACT WITH SKIN OR EYES PRODUCE MECHANIC AL IRRITATION. CHRONIC
EXPOSURES COULD CAUSE DERMATITIS. EXCESSIVE INHALATION POSE A LONG
TERM HEALTH HAZARD.

Explanat

ion of Carcinogenicity:IARC CONCLUDED THAT NICKEL COMPOUNDS
WERE CARCINOGENIC TO HUMANS & NICKEL METAL IS POSSIBLY CARCINOGENIC
TO HUMANS.

Effects of Overexposure:EXPOSURE TO WELDING FUMES MAY CAUSE METAL FUME
FEVER WITH SYMPTOMS OF CHILLS, FEVER, NAUSEA, COUGH, DRY THROAT,
WEAKNESS, MUSCLE ACHES, AND A SWEET OR METALLIC TASTE IN THE MOUTH.
PROLONGED OR REPEATE D EXPOSURE MAY CAUSE DIFFICULTY IN WALKING,
WEAKNESS OR CRAMPS IN THE LEGS, HOARSENESS, MEMORY LOSS, SKIN
SE

NSITIZATION.

Medical Cond Aggravated by Exposure:PRE-EXISTING CHRONIC SKIN, EYE OR RESPIRATORY DISORDERS MAY BE AGGRAVATED IF INDIVIDUALS ARE REPEATEDLY OVEREXPOSED TO FUMES AND DUST. NICKEL IS A KNOWN SENSITIZER AND MAY PRODUCE ALLERGIC REACTIONS.

=====
===== First Aid Measures =====

First Aid:EYES: FLUSH WITH RUNNING WATER FOR 15 MINUTES WHILE HOLDING EYELIDS OPEN. GET MEDICAL ATTENTION IF IRRITATION PERSISTS. SKIN: WASH WITH SOAP AND WATER TO REMOVE ANY METALLIC PARTICLES. IF A RASH DEVEL OPS, GET MEDICAL ATTENTION. INHALATION:REMOVE TO FRESH AIR. GIVE MOUTH-TO-MOUTH RESUSCITATION IF NOT BREATHING. GET MEDICAL ATTENTION. INGESTION: GET MEDICAL ATTENTION IF SYMPTOMS OF INGESTION ARISE.

=====
===== Fire Fighting Measures =====

Flash Point:NONE
Autoignition Temp:Autoignition Temp Text:NONE
Extinguishing Media:USE MEDIA APPROPRIATE FOR SURROUNDING FIRE.
Fire Fighting Procedures:NONE SPECIFIED BY MANUFACTURER.
Unusual Fire/Explosion Hazard:NONE

=====
===== Accidental Release Measures =====

Spill Release Procedures:VACUUM OR SHOVEL ANY SPILLED MATERIAL INTO A SUITABLE CONTAINER. ALLOY WASTES ARE NORMALLY COLLECTED TO RECOVER METAL VALUES. HOWEVER, IF DISPOSAL IS NECESSARY, DISPOSE IN ACCORDANCE WITH FEDERAL, STATE OR LOCAL REGULATIONS.

=====
===== Handling and Storage =====

Handling and Storage Precautions:WEAR GLOVES AND FLAME RETARDANT CLOTHING WHEN CUTTING, GRINDING OR WELDING. DO NOT EXPOSE SKIN TO RADIATION WHEN HOT CUTTING OR WELDING.
Other Precautions:PROVIDE PROTECTIVE SCREENS TO SHIELD OTHERS. WHEN ELECTRODES AND FLUXES ARE CONSUMED, THE FUME AND GAS DECOMPOSITION PRODUCTS GENERATED ARE DIFFERENT IN FORM FROM THE INGREDIENTS LISTED. NEW COMPOUNDS NOT IN THE ELECTRODES MAY FORM.

=====
===== Exposure Controls/Personal Protection =====

Respiratory Protection:RESPI

RATORY PROTECTION IS NECESSARY WHEN EXPOSURE LIMITS FOR AIRBORNE CONTAMINANTS ARE EXCEEDED DURING WELDING WITH THESE ELECTRODES. USE AIR-SUPPLIED RESPIRATOR IN CONFINED SPACES. USE ONLY NIOSH APPROVED RESPIRATORS I/A/W 29 CFR 1910.134.

Ventilation:USE LOCAL EXHAUST WHEN WELDING. MAINTAIN EXPOSURE BELOW ACCEPTABLE EXPOSURE LIMITS. CONFINED SPACES MAY REQUIRE A SCBA.

Protective Gloves:WELDERS LEATHER GLOVES

Eye Protection:OSHA APPROVED GOGGLES/FACE SHIELD W/LENS

Other Protecti

ve Equipment:FLAME RETARDANT CLOTHING. DO NOT EXPOSE SKIN OR EYES TO THE HEAT AND RADIATION FROM WELDING OPERATIONS.

Work Hygienic Practices:WASH THOROUGHLY BEFORE EATING OR SMOKING. LAUNDRER CONTAMINATED CLOTHING BEFORE REUSE.

Supplemental Safety and Health

WELDING AND HOT CUTTING FUMES & GASES CANNOT BE CLASSIFIED SIMPLY. THEIR COMPOSITION AND QUANTITY ARE DEPENDENT ON THE METAL BEING WELDED, THE PROCEDURES, PROCESSES AND THE TYPE OF WIRE OR ELECTRODES USED. OTHER INFLUENCING FACTORS ARE THE PRESENCE OF CONTAMINANTS. CHLORINATED SOLVENTS MAY DECOMPOSE TO TOXIC GASES.

===== Physical/Chemical Properties =====

HCC:N1

Melt/Freeze Pt:M.P/F.P Text:>1832F

Spec Gravity:4-6

Solubility in Water:NEGLIGIBLE

Appearance and Odor:0.094 INCH DIAMETER BY 12 INCH LONG SILVER COLORED WIRE WITH A FLUX COATING.

Percent Volatiles by Volume:0

===== Stability and Reactivity Data =====

Stability Indicator/Materials to Avoid:

YES

STRONG MINERAL ACIDS

Hazardous Decomposition Products:WELDING AND CUTTING OPERATION MAY INCLUDE OXIDES OF THE METALS, CHROMATES, FLUORIDES, COMPLEX METALLICS, AND OZONE.

===== Disposal Considerations =====

Waste Disposal Methods:RECYCLE OR DISPOSE IN ACCORDANCE WITH FEDERAL, STATE & LOCAL REGULATIONS.

Disclaimer (provided with this information by the compiling agencies):

This information is formulated for use by elements of the Department of

Defense. The United States of America in no manner whatsoever, expressly or implied, warrants this information to be accurate and disclaims all liability for its use. Any person utilizing this document should seek competent professional advice to verify and assume responsibility for the suitability of this information to their particular situation.